

# Soil Sample Survey

# Genesee Co.

**Samples analyzed by CNAL in 1995-2001**

---



Soil testing is an important part of integrated field and vegetable crop management in Genesee County.

**Summary compiled by**

**Quirine M. Ketterings, Hettie Krol, Shaw Reid & Nathan Herendeen**

---



Nutrient Management Spear Program: <http://nmsp.css.cornell.edu/>

---

Ketterings, Q.M., H. Krol, W.S. Reid and N. Herendeen (2003). Genesee County Soil Sample Survey 1995-2001. CSS Extension Bulletin E03-24. 39 pages.

# Soil Sample Survey

# Genesee Co.

## Samples analyzed by CNAL in 1995-2001

Summary compiled by

**Quirine Ketterings and Hettie Krol**  
Nutrient Management Spear Program  
Department of Crop and Soil Sciences  
817 Bradfield Hall, Cornell University  
Ithaca NY 14853

**W. Shaw Reid**  
Professor Emeritus  
Department of Crop and Soil Sciences

**Nathan Herendeen**  
Senior Extension Associate - Field Crops  
Cornell Cooperative Extension - North West New York Team

**September 15, 2003**

Correct Citation:

Ketterings, Q.M., H. Krol, W.S. Reid, and N. Herendeen (2003). Soil samples survey of Genesee County. Samples analyzed by the Cornell Nutrient Analysis Laboratory in 1995-2001. CSS Extension Bulletin E03-24. 39 pages.

## Table of Content

1. General Survey Summary.....	4
2. Cropping Systems .....	10
2.1 Samples for Home and Garden.....	10
2.2 Samples for Commercial Production.....	11
3. Soil Types .....	13
3.1 Samples for Home and Garden.....	13
3.2 Samples for Commercial Production.....	14
4. Organic Matter .....	16
4.1 Samples for Home and Garden.....	16
4.2 Samples for Commercial Production.....	17
5. pH .....	18
5.1 Samples for Home and Garden.....	18
5.2 Samples for Commercial Production.....	19
6. Phosphorus.....	20
6.1 Samples for Home and Garden.....	20
6.2 Samples for Commercial Production.....	21
7. Potassium .....	22
7.1 Samples for Home and Garden.....	22
7.2 Samples for Commercial Production.....	25
8. Magnesium .....	28
8.1 Samples for Home and Garden.....	28
8.2 Samples for Commercial Production.....	29
9. Iron.....	30
9.1 Samples for Home and Garden.....	30
9.2 Samples for Commercial Production.....	31
10. Manganese .....	32
10.1 Samples for Home and Garden.....	32
10.2 Samples for Commercial Production.....	33
11. Zinc .....	34
11.1 Samples for Home and Garden.....	34
11.2 Samples for Commercial Production.....	35
Appendix: Cornell Crop Codes .....	36

# 1. General Survey Summary

Genesee County is located in northwestern New York, midway between Buffalo and Rochester. It contains over 320,000 acres of land area. Roughly 70 % of the area is used for farm production. It is traditionally the county with the highest percentage of active farmland in New York.

The northern two-thirds of the county lies in the Ontario Lowlands with transition to the Appalachian Uplands in the south. The Ontario Lowlands begin at Lake Ontario, about 25 miles to the north where the elevation is 245 feet above sea level. In Genesee County, the Lowlands are about 600 feet elevation in the north extending to 1000 feet south of Batavia. At the Appalachian interface, the elevation transitions quickly from 1000 to 1500 feet elevation.

The soils in the north are dominated by high carbonate materials developed from the Niagara dolomite limestone to the north and the Onondaga limestone in the central part of the county. In the south, soils formed from the low carbonate Devonian shale deposits. Large areas of wetlands occur in the northern third of the county, the result of massive glacial outwash during the period of glacial recession from western New York. About 6000 acres of the wetlands were drained nearly 100 years ago. This area comprises the Elba muckland, a rich deposit of organic soils. These soils are used primarily for onion production.

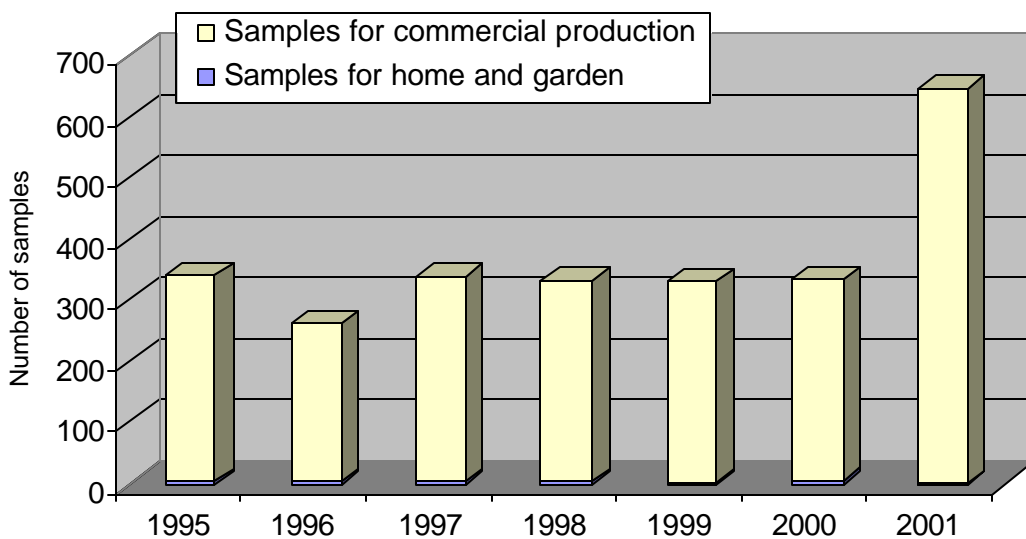
Additional areas of wetlands are protected in the federal Iroquois Wildlife Refuge, the state Tonawanda Wildlife Area and the Bergen Wetlands Wildlife Sanctuary. These areas are seasonal feeding and resting sites to many migratory waterfowl, especially Canada geese.

The agriculture of Genesee County is diverse. Dairy farming is the largest single generator of farm income. Livestock farmers produce and market beef, hogs and sheep from Genesee County. Thousands of acres are devoted to field and forage crops to support the dairy and livestock industry. Processing vegetable crops comprise the next largest segment of the agricultural economy. Crops grown for processing include peas, snap beans, sweet corn, red beets, kidney beans, cabbage, and carrots.

Fresh vegetables produced include all the above plus potatoes, cucumbers, squash, pumpkins, rutabagas and onions. Bedding plants and ornamentals are an increasing commodity on farms with greenhouses and nursery stock. Small fruits such as strawberries and blueberries are grown for fresh market. All the above industries rely heavily on soil testing to maintain optimum production while also protecting the agricultural environment from nutrient runoff.

Genesee County is headquarters to many of the largest farms in New York. It also has a large number of small farms with niche markets and grass based dairy farms.

This survey summarizes the soil test results from Genesee County soil samples submitted for analyses to the Cornell Nutrient Analysis Laboratory (CNAL) during 1995-2001.



<b>Homeowners</b>	
1995	6
1996	6
1997	5
1998	6
1999	4
2000	7
<u>2001</u>	<u>2</u>
<b>Total</b>	<b>36</b>

<b>Commercial</b>	
1995	335
1996	256
1997	334
1998	326
1999	325
2000	326
<u>2001</u>	<u>642</u>
<b>Total</b>	<b>2544</b>

<b>Total</b>	
1995	341
1996	262
1997	339
1998	332
1999	329
2000	333
<u>2001</u>	<u>644</u>
<b>Total</b>	<b>2580</b>

The total number of samples analyzed in these years amounted to 2580. Of these 2580 samples, 2544 (99%) were submitted to obtain fertilizer recommendations for commercial production while 36 samples (1%) were submitted as home and garden samples.

Eighteen of the 36 home and garden soil samples submitted during 1995-2001 were submitted to request fertilizer recommendations for lawns while 10 were submitted for home garden vegetable production. People submitting samples for commercial production requested fertilizer recommendations to corn silage or grain (29%), alfalfa or alfalfa/grass mixtures (16%), beans (15%), peas (8%), beets (5%), and sweet corn (5%), while a few producers were planning on growing other crops including barley, cabbage, grass for pasture and hay production, potatoes, soybeans and wheat.

Sixteen of the 36 home and garden samples in Genesee County were sandy loam soils belonging to soil management group 4 (44%). Eight samples belonged to soil management group 2 and 3 each. Group 5 was represented with 5 samples. The table below gives descriptions of each of the soil management groups.

Soil Management Groups for New York

1	Fine-textured soils developed from clayey lake sediments and medium- to fine-textured soils developed from lake sediments.
2	Medium- to fine-textured soils developed from calcareous glacial till and medium-textured to moderately fine-textured soils developed from slightly calcareous glacial till mixed with shale and medium-textured soils developed in recent alluvium.
3	Moderately coarse textured soil developed from glacial outwash and recent alluvium and medium-textured acid soil developed on glacial till.
4	Coarse- to medium-textured soils formed from glacial till or glacial outwash.
5	Coarse- to very coarse-textured soils formed from gravelly or sandy glacial outwash or glacial lake beach ridges or deltas.
6	Organic or muck soils with more than 80% organic matter.

Of the samples submitted for commercial production, 73% belonged to soil management group 2. One percent was from soil management group 1. Only very few samples (<1%) belonged to either group 5 or 6 while 15% was classified group 3 and 8% belonged to soil management group 4. The six most common soil series, all belonging to soil management group 2 or 3, were Ontario (17%), Lima (12%), Hilton (9%), Palmyra (8%), Lyons (5%) and Lansing (5%). These soils represent 11% (Ontario), 7% (Lima), 4% (Hilton), 5% (Palmyra), 5% (Lyons) and 2% (Lansing) of the total 316,900 acres in the county.

Organic matter levels, as measured by loss on ignition, ranged from less than 1% to over 40% with median values ranging from 3.8 to 4.4% organic matter for home and garden samples and from 2.6 to 3.1% organic matter for samples submitted for commercial production. Twenty six of the thirty six home and garden samples had between 2 and 5% organic matter with 6 testing between 2 and 2.9% organic matter, 10 between 3.0 and 3.9% organic matter and 10% between 4.0 and 4.9% organic matter. Nine of the soils submitted for home and garden tested >4.9% in organic matter while only one sample had less than 2% organic matter. Of the samples submitted for commercial production, 10% had less than 2% organic matter, 45% contained between 2 and 3% organic matter, 31% contained between 3 and 4% organic matter, 8% tested between 4.0 and 4.9% while 3% had organic matter concentrations of 5.0-5.9%. In total, 55% had less than 3% organic matter.

Soil pH in water (1:1 extraction ratio) varied from pH 4.5 to 8.2 with the median for home and garden samples ranging from pH 6.8 to pH 7.5 and for samples submitted for commercial production ranging from pH 6.7 to pH 7.0. Of the home and garden samples, 30 of the 36 samples tested between pH 6.5 and 7.9. For the samples submitted for commercial production, this was 83% while 16% tested between pH 5.0 and 6.5.

Extractable nutrients such as phosphorus (P), potassium (K), magnesium (Mg), calcium (Ca), iron (Fe), manganese (Mn), and zinc (Zn) were measured using the Morgan solution and extraction method (Morgan, 1941). This solution contains sodium acetate buffered at a pH of 4.8.

Soil test P levels of <1 lbs P/acre are classified as very low. Between 1-3 lbs P/acre is low. Medium is between 4-8 lbs P/acre. High testing soils have P levels between 9 and 39

lbs P/acre and soils with >39 lbs P/acre are classified as very high. Of the 36 home and garden samples, 3 tested low, 4 tested medium, 14 tested high and 15 tested very high in phosphorus. This meant that 81% tested high or very high in P.

Phosphorus levels for samples for commercial production in Genesee County were higher than the state average (50% tests high or very high in P). Fifteen percent of the samples tested very high in P. Nine percent was low in P, 21% tested medium for P while 55% of the submitted samples were classified as high in soil test P. This means that 70% tested high or very high in P. There were no clear trends in P levels over the 6 years.

Classifications for potassium depend on soil management group. The fine-textured soils of soil management group 1 have a greater K supplying capacity than the coarse textured sandy soils (soil management group 5). Classification for each of the management groups in the above table represent very low, low, medium, high and very high. So for example for soil management group 5 and 6, <60 lbs K/acre means the soil is very low in K, between 60 and 114 lbs K/acre is low, 115-164 lbs K/acre is medium, 165-269 lbs K/acre is high and >269 lbs K/acre is classified as very high (see the table below).

Potassium classifications depend on soil test K levels and soil management group.

Soil Management Group	Potassium Soil Test Value (Morgan extraction in lbs K/acre)				
	Very low	Low	Medium	High	Very High
1	<35	35-64	65-94	95-149	>149
2	<40	40-69	70-99	100-164	>164
3	<45	45-79	80-119	120-199	>199
4	<55	55-99	100-149	150-239	>239
5 and 6	<60	60-114	115-164	165-269	>269

Of the home and garden samples, 5 samples each were classified as low or medium in potassium. Nine samples were high in K while most samples (20) were very high in K. For samples submitted for commercial production, 4% tested low in K, 14% tested medium, 38% tested high and 40% tested very high in potassium (with the remainder



being unknown due to lack of soil series information). As with phosphorus, there were no trends over the 6 years of soil sampling.

Soils test very low for magnesium if Morgan extractable Mg is less than 20 lbs Mg/acre. Low testing soils have 20-65 lbs Morgan Mg per acre. Soils with 66-100 lbs Mg/acre test medium for magnesium. High testing soils have 101-199 lbs Mg/acre while soils with more than 200 lbs Mg/acre in the Morgan extraction are classified as very high in Mg. Magnesium levels ranged from 37 to almost 3000 lbs Mg/acre (Morgan extraction). There were no samples that tested very low in Mg. Most soils tested high or very high for Mg (100% of the homeowner soils and 99% of the soils of the commercial growers). None of the homeowner soils and only 18 of the commercial growers' soil tested low or medium in Mg. Thus, magnesium deficiency is not likely to occur in Genesee County provided the soil pH is maintained in the desirable range.

Soils with more than 50 lbs Morgan extractable Fe per acre test excessive for Fe. Anything lower than 50 lbs Fe/acre is considered normal. Iron levels fell for 94-100% in the normal range with only two of the home and garden samples and 11 of the commercial grower samples testing excessive for Fe. Similarly, most soils (97-99%) for both groups tested normal for manganese. Soils with more than 100 lbs Morgan extractable Mn per acre are classified as excessive in Mn. Anything less than 100 lbs Mn per acre is classified as normal. Soils with less than 0.5 lbs Zinc per acre in the Morgan extraction are classified as low in Zn. Medium testing soils have between 0.5 and 1 lbs of Morgan extractable Zn per acre. If more than 1 lbs of Zn/acre is extracted with the Morgan solution, the soil tests high in Zn. For the home and garden samples, 33 samples tested high for zinc while 3 tested medium in zinc. Of the samples for commercial production, 2% tested low in zinc, 26% tested medium while 72% were high in zinc.

In the following sections, the summary tables for each of the soil fertility indicators described above are given. The appendix contains the crop codes used in section 2.

#### Reference

- Morgan, M.F. 1941. Chemical soil diagnosis by the universal soil testing system. Connecticut Agricultural Experimental Station. Bulletin 450.

## 2. Cropping Systems

### 2.1 Samples for Home and Garden

Crops for which recommendations are requested by homeowners:

	1995	1996	1997	1998	1999	2000	2001	Total	%
FLA	0	0	1	0	0	0	0	1	3
LAW	3	4	1	3	2	4	1	18	50
MVG	2	2	2	0	2	1	1	10	28
OTH	0	0	0	0	0	1	0	1	3
PER	0	0	0	2	0	1	0	3	8
SAG	1	0	1	1	0	0	0	3	8
Total	6	6	5	6	4	7	2	36	100

Notes:

See Appendix for Cornell crop codes.

## 2.2 Samples for Commercial Production

Crops for which recommendations are requested for commercial production:

Current year crop	1995	1996	1997	1998	1999	2000	2001	Total	%
ABE/ABT	6	1	0	0	0	0	0	7	0
AGE/AGT	53	52	13	50	60	25	101	354	14
ALE/ALT	9	16	8	1	13	2	7	56	2
ACT	1	0	0	0	0	0	0	1	0
APP	2	0	1	1	2	1	1	8	0
BCE/BCT	1	0	0	2	0	0	0	3	0
BDR	6	0	0	3	1	0	0	10	0
BET	34	2	27	11	12	21	9	116	5
BGE/BGT	1	0	1	0	0	0	0	2	0
BLB	0	0	0	1	0	0	0	1	0
BND	0	1	10	4	3	2	9	29	1
BNS	32	31	44	63	60	50	73	353	14
BRP	0	0	0	1	0	0	0	1	0
BSP/BSS	8	6	18	5	0	2	0	39	2
BUK	0	0	0	0	1	0	0	1	0
BWI	0	0	1	0	0	0	0	1	0
CAR	4	0	0	0	2	0	0	6	0
CBP	1	0	0	1	2	2	1	7	0
CBS	1	0	0	0	0	2	10	13	1
CGE/CGT	1	0	1	1	0	1	0	4	0
CKS	0	0	0	0	0	1	9	10	0
CLE/CLT	3	1	0	0	0	1	0	5	0
COG/COS	65	101	105	79	108	73	196	727	29
CSE/CST	0	0	0	1	0	0	0	1	0
GIE/GIT	1	0	1	4	1	2	0	9	0
GRE/GRT	1	1	13	5	7	4	10	41	2
IDL	1	0	0	0	0	0	0	1	0
LET	0	1	0	0	0	0	0	1	0
MIX	0	3	7	1	0	2	4	17	1
OAS	1	1	0	0	3	0	0	5	0
OAT	7	1	1	0	0	0	1	10	0
ONP	0	2	0	0	2	0	0	4	0
ONS	1	0	0	0	0	0	0	1	0
OTH	0	0	1	0	0	2	0	3	0
PEA	41	1	32	34	12	48	40	208	8

Ketterings, Q.M., H. Krol, W.S. Reid and N. Herendeen (2003). Genesee County Soil Sample Survey 1995-2001. CSS Extension Bulletin E03-24. 39 pages.

Current year crop	1995	1996	1997	1998	1999	2000	2001	Total	%
PEP	0	0	0	0	1	0	0	1	0
PGE/PGT	0	0	0	0	0	0	1	25	1
PIE/PIT	4	3	1	0	0	0	0	8	0
PLE/PLT	0	0	1	0	0	0	29	30	1
PNE/PNT	0	0	8	0	0	0	13	21	1
POT	15	0	5	0	3	6	2	31	1
PUM	0	0	0	0	0	0	5	5	0
RSS	0	0	0	1	0	0	0	1	0
RYC	0	0	0	1	0	0	0	1	0
RYS	0	0	0	0	0	0	2	2	0
SOY	4	14	0	29	0	7	0	54	2
SQS	0	0	0	0	0	0	4	4	0
SQW	3	0	0	0	0	2	0	5	0
STS	0	0	0	5	0	0	0	5	0
SWC	9	5	17	8	19	52	20	130	5
TOM	1	0	1	0	0	0	0	2	0
WHS	1	0	2	0	0	2	1	6	0
WHT	8	12	12	12	11	14	13	82	3
WPE	0	0	0	0	0	1	0	1	0
Unknown	9	1	3	2	2	1	57	75	3
Total	335	256	334	326	325	326	642	2544	100

Notes:

See Appendix for Cornell crop codes.

### 3. Soil Types

#### 3.1 Samples for Home and Garden

Soil types (soil management groups) for home and garden samples:

	1995	1996	1997	1998	1999	2000	2001	Total
SMG 1 (clayey)	0	0	0	0	0	0	0	0
SMG 2 (silty)	4	1	0	0	1	2	0	8
SMG 3 (silt loam)	0	0	1	1	3	2	1	8
SMG 4 (sandy loam)	2	3	2	5	0	3	1	16
SMG 5 (sandy)	0	2	2	0	0	0	0	4
SMG 6 (mucky)	0	0	0	0	0	0	0	0
Total	6	6	5	6	4	7	2	36

### 3.2 Samples for Commercial Production

Soil series for samples submitted for commercial production:

Name	SMG	1995	1996	1997	1998	1999	2000	2001	Total
Allis	3	0	0	0	0	1	0	0	1
Angola	2	0	0	2	0	0	0	4	6
Appleton	2	0	1	0	3	1	0	2	7
Arkport	4	17	5	9	8	2	11	17	69
Benson	4	3	0	2	4	4	14	3	30
Burdett	2	1	12	0	20	0	1	5	39
Canandaigu	3	1	3	0	3	0	3	8	18
Cazenovia	2	3	0	2	8	1	14	5	33
Chenango	3	0	0	1	4	3	2	2	12
Collamer	3	4	1	1	11	9	3	2	31
Colonie	5	1	0	1	0	0	0	1	3
Conesus	2	4	22	2	35	4	4	23	94
Darien	2	2	0	15	6	6	6	33	68
Dunkirk	3	3	3	2	3	2	5	9	27
Edwards	6	0	0	0	0	2	0	0	2
Eel	2	2	0	0	0	0	0	0	2
Galen	4	13	7	15	6	6	10	19	76
Genesee	2	1	0	1	1	0	0	3	6
Halsey	4	2	2	0	2	1	3	3	13
Hilton	2	27	11	53	12	10	33	73	219
Honeoye	2	3	1	6	0	14	5	4	33
Hornell	2	0	0	0	0	5	0	2	7
Ilion	2	2	2	1	5	1	1	13	25
Lakemont	1	0	0	5	0	0	0	1	6
Lamson	4	0	0	0	2	0	1	0	3
Lansing	2	11	10	13	17	22	17	27	117
Lima	2	24	22	39	54	60	40	62	301
Lyons	2	11	16	15	20	29	13	29	133
Madalin	1	0	0	1	1	2	0	1	5
Manheim	2	1	3	5	1	1	0	13	24
Manlius	3	0	0	0	0	8	0	0	8
Marilla	3	0	2	1	0	0	0	0	3
Minoa	4	0	0	1	0	0	0	0	1
Mohawk	2	33	2	9	4	3	1	8	60
Muck	6	1	0	1	1	1	0	0	4
Niagara	3	4	2	5	3	5	6	7	32

Ketterings, Q.M., H. Krol, W.S. Reid and N. Herendeen (2003). Genesee County Soil Sample Survey 1995-2001. CSS Extension Bulletin E03-24. 39 pages.

Name	SMG	1995	1996	1997	1998	1999	2000	2001	Total
Nunda	2	2	9	4	9	1	0	4	29
Odessa	2	0	1	0	0	1	5	4	11
Ontario	2	61	36	55	42	39	56	144	433
Ovid	2	10	21	12	14	3	22	19	101
Palmyra	3	54	26	28	11	35	24	31	209
Phelps	3	3	7	11	3	9	8	7	48
Remsen	2	10	0	6	1	6	5	17	45
Rhinebeck	2	2	4	4	0	10	3	8	31
Romulus	2	1	0	0	0	1	0	2	4
Schoharie	1	3	1	0	0	0	0	0	4
Scio	3	0	2	0	0	1	1	0	4
Teel	2	1	6	1	2	6	0	4	20
Wayland	2	0	1	1	0	1	0	0	3
Unknown	-	14	15	4	10	9	9	23	84
Total	-	335	256	334	326	325	326	642	2544

## 4. Organic Matter

### 4.1 Samples for Home and Garden

Number of home and garden samples within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	0	0	2	1	3	0	0	0	6
1996	0	1	1	0	3	1	0	0	6
1997	0	0	1	1	2	1	0	0	5
1998	0	0	1	2	0	1	2	0	6
1999	0	0	1	1	2	0	0	0	4
2000	0	0	0	4	0	1	1	1	7
2001	0	0	0	1	0	1	0	0	2
Total	0	1	6	10	10	5	3	1	36

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	2.2	1.9	2.8	2.7	2.9	3.3	3.0	
Highest:	4.7	5.1	5.6	6.7	4.4	9.7	5.7	
Mean:	3.7	3.8	4.2	4.5	3.8	5.0	4.4	
Median:	4.2	4.4	4.1	4.1	3.9	3.8	4.4	

Percent of home and garden samples within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	.	.	.	.	.	.	.	.	100
1996	.	.	.	.	.	.	.	.	100
1997	.	.	.	.	.	.	.	.	100
1998	.	.	.	.	.	.	.	.	100
1999	.	.	.	.	.	.	.	.	100
2000	.	.	.	.	.	.	.	.	100
2001	.	.	.	.	.	.	.	.	100
Total	0	3	17	28	28	14	8	3	100



## 4.2 Samples for Commercial Production

Number of samples for commercial production within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	1	48	110	104	44	21	4	3	335
1996	1	15	119	89	23	6	2	1	256
1997	3	46	158	94	25	7	0	1	334
1998	2	15	165	116	15	6	4	3	326
1999	0	30	117	139	30	7	0	2	325
2000	1	33	177	89	22	3	1	0	326
2001	4	74	308	165	53	22	8	8	642
Total	12	261	1154	796	212	72	19	18	2544

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	0.9	0.5	0.8	0.4	1.0	0.5	0.5	
Highest:	48.2	7.9	8.7	8.5	41.0	6.4	10.6	
Mean:	3.3	3.0	2.8	3.0	3.2	2.8	3.0	
Median:	3.1	2.9	2.6	2.8	3.0	2.6	2.7	

Percent of samples for commercial production within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	0	14	33	31	13	6	1	1	100
1996	0	6	46	35	9	2	1	0	100
1997	1	14	47	28	7	2	0	0	100
1998	1	5	51	36	5	2	1	1	100
1999	0	9	36	43	9	2	0	1	100
2000	0	10	54	27	7	1	0	0	100
2001	1	12	48	26	8	3	1	1	100
Total	0	10	45	31	8	3	1	1	100

## 5. pH

### 5.1 Samples for Home and Garden

Number of home and garden samples within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	1	0	0	0	0	4	1	0	0	6
1996	0	0	1	0	0	2	3	0	0	0	6
1997	0	0	0	1	1	1	2	0	0	0	5
1998	0	0	0	0	1	1	3	1	0	0	6
1999	0	0	0	0	1	0	1	2	0	0	4
2000	0	0	0	0	0	1	4	2	0	0	7
2001	0	0	0	0	0	0	2	0	0	0	2
Total	0	1	1	1	3	5	19	6	0	0	36

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	4.9	5.2	5.8	6.2	6.1	6.7	7.1	
Highest:	7.8	7.4	7.3	7.7	7.7	7.6	7.3	
Mean:	-	-	-	-	-	-	-	
Median:	7.1	6.9	6.8	7.2	7.5	7.4	7.2	

Percent of home and garden samples within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	.	.	.	.	.	.	.	.	.	.	100
1996	.	.	.	.	.	.	.	.	.	.	100
1997	.	.	.	.	.	.	.	.	.	.	100
1998	.	.	.	.	.	.	.	.	.	.	100
1999	.	.	.	.	.	.	.	.	.	.	100
2000	.	.	.	.	.	.	.	.	.	.	100
2001	.	.	.	.	.	.	.	.	.	.	100
Total	0	3	3	3	8	14	53	17	0	0	100

## 5.2 Samples for Commercial Production

Number of samples for commercial production within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	0	2	19	50	117	100	45	2	0	335
1996	0	0	2	7	30	78	117	20	2	0	256
1997*	0	1	4	8	59	134	92	27	0	0	325
1998	0	3	6	12	20	116	138	28	3	0	326
1999	0	0	3	11	38	99	126	44	4	0	325
2000	0	0	1	7	26	111	123	51	7	0	326
2001	0	2	2	20	78	184	244	108	4	0	642
Total	0	6	20	84	301	839	940	323	22	0	2535

\* Nine samples were not analyzed for pH in 1997.

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	5.4	5.1	4.7	4.5	5.1	5.3	4.6	
Highest:	8.2	8.0	1.9	8.0	8.1	8.2	8.1	
Mean:	-	-	-	-	-	-	-	
Median:	6.9	7.0	6.7	7.0	7.0	7.0	7.0	

Percent of samples for commercial production within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	0	1	6	15	35	30	13	1	0	100
1996	0	0	1	3	12	30	46	8	1	0	100
1997	0	0	1	2	18	41	28	8	0	0	100
1998	0	1	2	4	6	36	42	9	1	0	100
1999	0	0	1	3	12	30	39	14	1	0	100
2000	0	0	0	2	8	34	38	16	2	0	100
2001	0	0	0	3	12	29	38	17	1	0	100
Total	0	0	1	3	12	33	37	13	1	0	100

## 6. Phosphorus

### 6.1 Samples for Home and Garden

Number of home and garden samples within each range Morgan extractable P range (lbs/acre Morgan P):

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	0	1	1	3	1	0	0	0	0	0	6
1996	0	1	1	2	0	1	0	0	0	1	6
1997	0	0	1	1	0	1	0	0	1	1	5
1998	0	1	0	0	0	2	1	1	1	0	6
1999	0	0	1	2	0	1	0	0	0	0	4
2000	0	0	0	5	0	0	0	1	0	1	7
2001	0	0	0	1	0	0	0	0	0	1	2
Total	0	3	4	14	1	5	1	2	2	4	36

VL = very low, L = low, M = medium, H = high, VH = very high.

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	5	2	6	13	10	
Highest:	57	396	210	153	79	433	224	
Mean:	18	84	97	81	28	95	117	
Median:	10	12	75	81	14	24	117	

Percent of home and garden samples within each Morgan extractable phosphorus range:

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	.	.	.	.	.	.	.	.	.	.	100
1996	.	.	.	.	.	.	.	.	.	.	100
1997	.	.	.	.	.	.	.	.	.	.	100
1998	.	.	.	.	.	.	.	.	.	.	100
1999	.	.	.	.	.	.	.	.	.	.	100
2000	.	.	.	.	.	.	.	.	.	.	100
2001	.	.	.	.	.	.	.	.	.	.	100
Total	0	8	11	39	3	14	3	6	6	11	100

VL = very low, L = low, M = medium, H = high, VH = very high.

## 6.2 Samples for Commercial Production

Number of samples submitted for commercial production within each Morgan extractable phosphorus (lbs P/acre) range:

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	0	49	82	161	30	4	4	4	0	1	335
1996	0	17	52	135	42	4	3	1	1	1	256
1997	0	23	65	225	14	4	2	1	0	0	334
1998	0	39	93	181	8	3	1	0	0	1	326
1999	0	26	55	163	45	14	8	8	1	5	325
2000	0	15	59	197	28	8	8	8	3	0	326
2001	0	54	126	345	53	22	11	18	7	5	642
Total	0	223	532	1407	220	59	37	40	12	14	2544

VL = very low, L = low, M = medium, H = high, VH = very high.

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	1	1	1	1	1	
Highest:	394	470	106	215	357	171	380	
Mean:	19	24	20	14	30	25	28	
Median:	12	16	14	11	18	15	16	

Percent of samples submitted for commercial production within each Morgan P range:

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	0	15	24	48	9	1	1	1	0	0	100
1996	0	7	20	53	16	2	1	0	0	0	100
1997	0	7	19	67	4	1	1	0	0	0	100
1998	0	12	29	56	2	1	0	0	0	0	100
1999	0	8	17	50	14	4	2	2	0	2	100
2000	0	5	18	60	9	2	2	2	1	0	100
2001	0	8	20	54	8	3	2	3	1	1	100
Total	0	9	21	55	9	2	1	2	0	1	100

VL = very low, L = low, M = medium, H = high, VH = very high.

## 7. Potassium

### 7.1 Samples for Home and Garden

Number of home and garden samples within each K range (lbs K/acre Morgan extraction):

Soil Management Group 1						
	<35	35-64	65-94	95-149	>149	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	0	0	0	0	0
Total (%)	-	-	-	-	-	-
Soil Management Group 2						
	<40	40-69	70-99	100-164	>164	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	1	1	2	4
1996	0	0	0	1	0	1
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	0	0	0	1	0	1
2000	0	0	0	0	2	2
2001	0	0	0	0	0	0
Total (#)	0	0	1	3	4	8
Total (%)	0	0	13	38	50	100
Soil Management Group 3						
	<45	45-79	80-119	120-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	1	1
1998	0	0	1	0	0	1
1999	0	0	0	0	3	3
2000	0	0	0	2	0	2
2001	0	0	0	0	1	1
Total (#)	0	0	1	2	5	8
Total (%)	0	0	13	25	63	100

Soil Management Group 4						
	<55	55-99	100-149	150-239	>239	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	2	2
1996	0	1	1	0	1	3
1997	0	0	0	0	2	2
1998	0	0	0	3	2	5
1999	0	0	0	0	0	0
2000	0	1	0	0	2	3
2001	0	0	0	1	0	2
Total (#)	0	2	1	4	10	16
Total (%)	0	13	6	25	58	100
Soil Management Group 5						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	1	0	1	2
1997	0	0	1	0	1	2
1998	0	0	0	0	0	0
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	0	2	0	2	4
Total (%)	0	0	50	0	50	100
Soil Management Group 6						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	0	0	0	0	0
Total (%)	-	-	-	-	-	-

Number of home and garden samples within each potassium classification:

Summary (#)	Very Low	Low	Medium	High	Very High	Total
1995	0	0	1	1	4	6
1996	0	1	2	1	2	6
1997	0	0	1	0	4	5
1998	0	0	1	3	2	6
1999	0	0	0	1	3	4
2000	0	1	0	2	4	7
2001	0	1	0	2	4	2
Total #	0	2	5	9	20	36

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	75	56	137	104	158	96	157	
Highest:	308	715	585	369	315	469	997	
Mean:	192	237	352	222	259	251	577	
Median:	187	147	302	201	281	242	577	

Percent of samples submitted for home and garden within each potassium classification.

Summary (%)	Very Low	Low	Medium	High	Very High	Total
1995	.	.	.	.	.	100
1996	.	.	.	.	.	100
1997	.	.	.	.	.	100
1998	.	.	.	.	.	100
1999	.	.	.	.	.	100
2000	.	.	.	.	.	100
2001	.	.	.	.	.	100
Grand Total	0	6	14	25	56	100



## 7.2 Samples for Commercial Production

Number of samples submitted for commercial production within each potassium (lbs K/acre Morgan extraction) range:

Soil Management Group 1						
	<35	35-64	65-94	95-149	>149	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	1	2	3
1996	0	0	0	1	0	1
1997	0	0	3	3	0	6
1998	0	0	0	0	1	1
1999	0	0	0	0	2	2
2000	0	0	0	0	0	0
2001	0	0	0	0	2	2
Total (#)	0	0	3	5	7	15
Total (%)	0	0	20	33	47	100
Soil Management Group 2						
	<40	40-69	70-99	100-164	>164	Total
	Very Low	Low	Medium	High	Very High	
1995	0	3	25	91	93	212
1996	0	3	28	73	76	180
1997	0	12	35	107	92	246
1998	0	6	49	131	68	254
1999	2	5	21	89	108	225
2000	0	3	31	82	110	226
2001	0	18	67	180	243	508
Total (#)	2	50	256	753	790	1851
Total (%)	0	3	14	41	43	100
Soil Management Group 3						
	<45	45-79	80-119	120-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	5	13	27	24	69
1996	0	1	7	17	21	46
1997	1	3	10	23	12	49
1998	1	2	2	16	17	38
1999	0	6	14	29	24	73
2000	2	5	10	17	18	52
2001	0	1	9	21	35	66
Total (#)	4	23	65	150	151	393
Total (%)	1	6	17	38	38	100

Soil Management Group 4						
	<55	55-99	100-149	150-239	>239	Total
	Very Low	Low	Medium	High	Very High	
1995	1	1	16	11	6	35
1996	0	4	2	3	5	14
1997	0	3	1	14	9	27
1998	0	5	7	9	1	22
1999	0	0	2	2	9	13
2000	0	3	4	11	21	39
2001	0	3	10	11	18	42
Total (#)	1	19	42	61	69	192
Total (%)	1	10	22	32	36	100
Soil Management Group 5						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	1	1
1996	0	0	0	0	0	0
1997	0	0	0	0	1	1
1998	0	0	0	0	0	0
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	1	0	1
Total (#)	0	0	0	1	2	3
Total (%)	0	0	0	33	67	100
Soil Management Group 6						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	1	1
1996	0	0	0	0	0	0
1997	0	1	0	0	0	1
1998	0	0	0	1	0	1
1999	0	0	1	1	1	3
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	1	1	2	2	6
Total (%)	0	17	17	33	33	100

Number of samples submitted for commercial production within each potassium classification.

Summary (#)	Very Low	Low	Medium	High	Very High	Un-known	Total
1995	1	9	54	130	127	14	335
1996	0	8	37	94	102	15	256
1997	1	19	49	147	114	4	334
1998	1	13	58	157	87	10	326
1999	2	11	38	121	144	9	325
2000	2	11	45	110	149	9	326
2001	0	22	86	213	298	23	642
Grand Total	7	93	367	972	1021	84	2544

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	52	48	42	44	29	36	42	
Highest:	818	1699	545	533	893	726	2189	
Mean:	181	185	168	153	218	193	220	
Median:	161	154	150	137	166	167	168	

Percent of samples submitted for commercial production within each potassium classification.

% summary	Very Low	Low	Medium	High	Very High	Un-known	Total
1995	0	3	16	39	38	4	100
1996	0	3	14	37	40	6	100
1997	0	6	15	44	34	1	100
1998	0	4	18	48	27	3	100
1999	1	3	12	37	44	3	100
2000	1	3	14	34	46	3	100
2001	0	3	13	33	46	4	100
Grand Total	0	4	14	38	40	3	100

## 8. Magnesium

### 8.1 Samples for Home and Garden

Number of home and garden samples within each Mg range (lbs Morgan Mg/acre):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	6	6
1996	0	0	0	0	6	6
1997	0	0	0	0	5	5
1998	0	0	0	0	6	6
1999	0	0	0	0	4	4
2000	0	0	0	0	7	7
2001	0	0	0	0	2	2
Total	0	0	0	0	36	36

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	244	235	253	242	209	317	245	
Highest:	697	763	694	984	1173	1053	640	
Mean:	475	419	454	649	695	611	442	
Median:	442	368	439	676	700	553	442	

Percent of home and garden samples within each Mg range (lbs Morgan Mg/acre):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	.	.	.	.	.	100
1996	.	.	.	.	.	100
1997	.	.	.	.	.	100
1998	.	.	.	.	.	100
1999	.	.	.	.	.	100
2000	.	.	.	.	.	100
2001	.	.	.	.	.	100
Total	0	0	0	0	100	100

## 8.2 Samples for Commercial Production

Number of samples submitted for commercial production within each Mg range (lbs Mg/acre Morgan extraction):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	1	1	38	295	335
1996	0	3	0	15	238	256
1997	0	2	4	35	293	334
1998	0	2	2	19	303	326
1999	0	0	1	16	308	325
2000	0	0	1	23	302	326
2001	0	1	0	33	608	642
Total	0	9	9	179	2347	2544

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	61	41	41	37	90	98	57	
Highest:	2992	969	1074	1043	2102	916	2377	
Mean:	405	414	402	405	463	421	467	
Median:	369	400	388	393	448	409	429	

Percent of samples submitted for commercial production within each magnesium range (lbs Mg/acre Morgan extraction):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	11	88	100
1996	0	1	0	6	93	100
1997	0	1	1	10	88	100
1998	0	1	1	6	93	100
1999	0	0	0	5	95	100
2000	0	0	0	7	93	100
2001	0	0	0	5	95	100
Total	0	0	0	7	92	100

## 9. Iron

### 9.1 Samples for Home and Garden

Iron (lbs Fe/acre Morgan extraction) in samples for home and garden:

Total number of samples:

	0-49	>49	Total
	Normal	Excessive	
1995	5	1	6
1996	5	1	6
1997	5	0	5
1998	6	0	6
1999	4	0	4
2000	7	0	7
2001	2	0	2
Total	34	2	36

Percentages:

	0-49	>49	Total
	Normal	Excessive	
	.	.	100
	.	.	100
	.	.	100
	.	.	100
	.	.	100
	.	.	100
	.	.	100
	.	.	100
	94	6	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	2	2	2	3	2	1	3	
Highest:	132	64	11	11	6	9	11	
Mean:	27	17	6	6	3	4	7	
Median:	8	9	5	5	3	4	7	

## 9.2 Samples for Commercial Production

Iron (lbs Fe/acre Morgan extraction) in samples submitted for commercial production:

Total number of samples:

	0-49	>49	Total
	Normal	Excessive	
1995	335	0	335
1996	255	1	256
1997	334	0	334
1998	319	7	326
1999	324	1	325
2000	325	1	326
2001	641	1	642
Total	2533	11	2544

Percentages:

	0-49	>49	Total
	Normal	Excessive	
	100	0	100
	100	0	100
	100	0	100
	98	2	100
	100	0	100
	100	0	100
	100	0	100
	100	0	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	1	1	1	1	1	
Highest:	46	63	45	124	93	71	54	
Mean:	5	6	5	6	5	4	4	
Median:	4	4	4	4	3	3	3	

## 10. Manganese

### 10.1 Samples for Home and Garden

Manganese (lbs Mn/acre Morgan extraction) in samples for home and garden:

Total number of samples:				Percentages:		
	0-99	>99	Total	0-99	>99	Total
	Normal	Excessive		Normal	Excessive	
1995	6	0	6	.	.	100
1996	5	1	6	.	.	100
1997	5	0	5	.	.	100
1998	6	0	6	.	.	100
1999	4	0	4	.	.	100
2000	7	0	7	.	.	100
2001	2	0	2	.	.	100
Total	35	1	36	97	3	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	33	12	22	21	22	14	17	
Highest:	64	101	73	40	34	37	97	
Mean:	43	38	48	29	30	21	57	
Median:	37	28	42	28	32	20	57	



## 10.2 Samples for Commercial Production

Manganese (lbs Mn/acre Morgan extraction) in samples for commercial production:

Total number of samples:

	0-99	>99	Total
	Normal	Excessive	
1995	329	6	335
1996	248	8	256
1997	334	0	334
1998	324	2	326
1999	322	3	325
2000	325	1	326
2001	635	7	642
Total	2517	27	2544

Percentages:

	0-99	>99	Total
	Normal	Excessive	
	98	2	100
	97	3	100
	100	0	100
	99	1	100
	99	1	100
	100	0	100
	99	1	100
	99	1	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	6	6	9	8	10	7	11	
Highest:	204	170	99	222	126	215	245	
Mean:	28	37	30	28	36	28	33	
Median:	24	33	26	26	32	25	30	

## 11. Zinc

### 11.1 Samples for Home and Garden

Zinc (lbs Zn/acre Morgan extraction) in samples for home and garden:

Total number of samples:					Percentages:			
	<0.5	0.5-1.0	>1	Total	<0.5	0.5-1.0	>1	Total
	Low	Medium	High		Low	Medium	High	
1995	0	1	5	6	.	.	.	100
1996	0	1	5	6	.	.	.	100
1997	0	0	5	5	.	.	.	100
1998	0	1	5	6	.	.	.	100
1999	0	0	4	4	.	.	.	100
2000	0	0	7	7	.	.	.	100
2001	0	0	2	2	.	.	.	100
Total	0	3	33	36	0	8	92	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	0.8	0.9	1.7	1.0	6.7	1.2	1.1	
Highest:	6.0	27.9	25.0	35.8	99.3	43.8	7.6	
Mean:	2.9	7.4	9.7	15.6	32.5	13.8	4.3	
Median:	2.5	3.7	5.9	9.0	12.0	3.8	4.3	

## 11.2 Samples for Commercial Production

Zinc (lbs Zn/acre Morgan extraction) in samples for commercial production:

Total number of samples:

	<0.5	0.5-1.0	>1	Total
	Low	Medium	High	
1995	6	125	204	335
1996	2	66	188	256
1997	4	90	240	334
1998	9	117	200	326
1999	6	88	231	325
2000	7	82	237	326
2001	7	95	540	642
Total	41	663	1840	2544

Percentages:

<0.5	0.5-1.0	>1	Total
Low	Medium	High	
2	37	61	100
1	26	73	100
1	27	72	100
3	36	61	100
2	27	71	100
2	25	73	100
1	15	84	100
2	26	72	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	0.4	0.4	0.3	0.1	0.2	0.3	0.1	
Highest:	52.9	137.9	20.2	9.9	45.1	21.8	111.1	
Mean:	1.6	2.6	2.0	1.6	2.1	2.0	2.6	
Median:	1.2	1.4	1.4	1.2	1.5	1.5	1.9	

## Appendix: Cornell Crop Codes

Crop codes are used in the Cornell Nutrient Analyses Laboratory.

Crop Code	Crop Description
Alfalfa	
ABE	Alfalfa trefoil grass, Establishment
ABT	Alfalfa trefoil grass, Established
AGE	Alfalfa grass, Establishment
AGT	Alfalfa grass, Established
ALE	Alfalfa, Establishment
ALT	Alfalfa, Established
Birdsfoot	
BCE	Birdsfoot trefoil clover, Establishment
BCT	Birdsfoot trefoil clover, Established
BGE	Birdsfoot trefoil grass, Establishment
BGT	Birdsfoot trefoil grass, Established
BSE	Birdsfoot trefoil seed, Establishment
BST	Birdsfoot trefoil seed, Established
BTE	Birdsfoot trefoil, Establishment
BTT	Birdsfoot trefoil, Established
Barley	
BSP	Spring barley
BSS	Spring barley with legumes
BUK	Buckwheat
BWI	Winter barley
BWS	Winter barley with legumes
Clover	
CGE	Clover grass, Establishment
CGT	Clover grass, Established
CLE	Clover, Establishment
CLT	Clover, Established
CSE	Clover seed production, Establishment
CST	Clover seed production, Established

Crop Code	Crop Description
<b>Corn</b>	
COG	Corn grain
COS	Corn silage
<b>Grasses, pastures, covercrops</b>	
GIE	Grasses intensively managed, Establishment
GIT	Grasses intensively managed, Established
GRE	Grasses, Establishment
GRT	Grasses, Established
PGE	Pasture, Establishment
PGT	Pasture improved grasses, Established
PIE	Pasture intensively grazed, Establishment
PIT	Pasture intensively grazed, Established
PLE	Pasture with legumes, Establishment
PLT	Pasture with legumes, Established
PNT	Pasture native grasses
PNE	Pasture native grasses, Established
RYC	Rye cover crop
RYS	Rye seed production
TRP	Triticale peas
<b>Small grains</b>	
MIL	Millet
OAS	Oats with legume
OAT	Oats
SOF	Sorghum forage
SOG	Sorghum grain
SOY	Soybeans
SSH	Sorghum sudan hybrid
SUD	Sudangrass
WHS	Wheat with legume
WHT	Wheat
<b>Others</b>	
ACT	Apricots
ALG	Azalea
APP	Apples

Crop Code	Crop Description
ATF	Athletic Field
ASP	Asparagus
BDR/BND	Beans-dry
BET	Beets
BLU/BLB	Blueberries
BNS	Beans, Snap
BRP	Broccoli, Transplanted
CBS	Cabbage, Seeded
CBP	Cabbage, Transplanted
CEM	Cemetery
CKS	Cucumber, Seeded
END	Endives
FAR	Fairway
FLA	Flowering Annuals
GRA	Grapes
GEN	Green
HRB	Herbs
IDL	Idle land
LAW	Lawn
LET	Lettuce
MIX/MVG	Mixed vegetables
MML	Muskmelon
ONP	Onions, Transplanted
ONS	Onions, Seeded
OTH	Other
PAR	Pears
PEA	Peas
PEP	Peppers
PER	Perennials
POP	Popcorn
PRK	Park
POT/PTO	Potatoes
PUM	Pumpkins
ROD	Roadside
ROS	Roses
ROU	Rough
RSF	Raspberries, Fall
RSP	Raspberries (homeowners)
RSS	Raspberries, Summer

Crop Code	Crop Description
SAG	Ornamentals adapted to pH 6.0 to 7.5
SQS	Squash, Summer
SQW	Squash, Winter
STE	Strawberries, Ever
STR	Strawberries (homeowners)
STS	Strawberries, Spring
SUN	Sunflowers
SWC	Sweet corn
TOM	Tomatoes
TRE	Christmas trees, Established
TRF	Tree fruits
TRT	Christmas trees, Topdressing
WPE	Waterways, Ponds and Dikes